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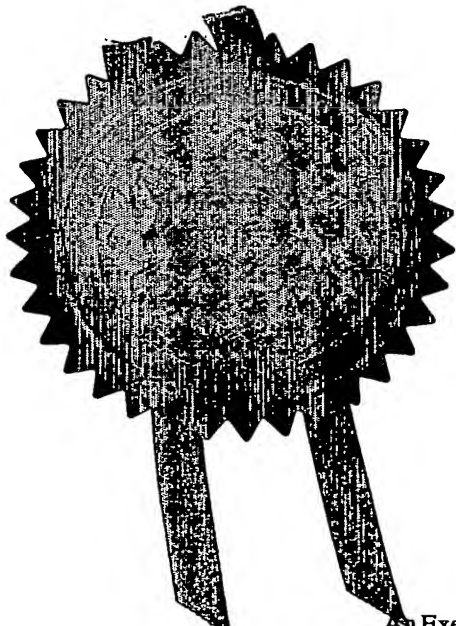
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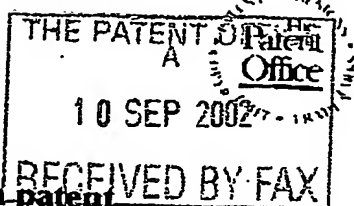
*P. Mahoney*

Dated

12 September 2003

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Patents Act 1977  
(Rule 16)11SEP02 E747116-1 D02246  
P01/7700 0.00-0220948.4

## Request for grant of a patent

(See the notes on the back of this form. You can also get an explanatory leaflet from the Patent Office to help you fill in this form)

The Patent Office

Cardiff Road  
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NP10 8QQ

1 Your reference

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3. Full name, address and postcode of the or of each applicant (underline all surnames)

INTELLPROP LIMITED  
PO BOX 626NATIONAL WESTMINSTER HOUSE  
LE TRUCHOT ST PIER PORT  
GUERNSEY

Patents ADP number (if you know it)

If the applicant is a corporate body, give the country/state of its incorporation

A GUERNSEY COMPANY

689 4604001

4. Title of the invention

TELECOMMUNICATIONS SERVICES APPARATUS

5. Name of your agent (if you have one)

D Young &amp; Co

"Address for service" in the United Kingdom to which all correspondence should be sent (including the postcode)

21 New Fetter Lane  
London  
EC4A 1DA

Patents ADP number (if you know it)

59006

6. If you are declaring priority from one or more earlier patent applications, give the country and the date of filing of the or of each of these earlier applications and (if you know it) the or each application number

Country

Priority application number  
(if you know it)Date of filing  
(day month year)

7. If this application is divided or otherwise derived from an earlier UK application, give the number and the filing date of the earlier application

Number of earlier application

Date of filing  
(day month year)

8. Is a statement of inventorship and of right to grant of a patent required in support of this request? (Answer 'Yes' if:

Yes

a) any applicant named in part 3 is not an inventor, or

b) there is an inventor who is not named as an applicant, or

c) any named applicant is a corporate body;

See note (d))

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Description 5

Claim(s) 0

Abstract 0

Drawing(s) 1 *only for*

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Statement of inventorship and right to grant of a patent (Patents Form 7/77) 2 ✓

Request for preliminary examination and search (Patents Form 9/77) 0

Request for substantive examination (Patents Form 10/77) 0

Any other documents Facsimile Letter Dated 10 September 2002  
(please specify)

11.

I/We request the grant of a patent on the basis of this application.

Signature *D. Young & Co.*

Date 10.09.02

D Young &amp; Co (Agents for the Applicants)

12. Name and daytime telephone number of person to contact in the United Kingdom

Adam Pilch

023 8071 9500

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DUPLICATE

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**TELECOMMUNICATIONS SERVICES APPARATUS****FIELD OF INVENTION:**

Text Messaging is established as a popular and effective means of communication for users of mobile telephones. The Short Message Services (SMS) of the GSM mobile telephony system provide an example of such a text messaging facility, and support for the composition, transmission and reception of Short Messages is present in the majority of GSM mobile terminals. Text messaging requires alphanumeric entry using the standardised Man Machine Interface (MMI) of the mobile handset, and also requires that the message be addressed to the desired recipient. The destination address for the message may typically be specified either by entering a Mobile Station ISDN number (MSISDN) that is the mobile telephone number of the desired recipient, or by selecting an entry from the handset's address book that already has the desired MSISDN pre-programmed in. The address book normally provides the MSISDN by using alphanumeric look-up of a name.

15

**BACKGROUND OF THE INVENTION:**

The SMS mechanism was originally defined for mobile to mobile text messaging, but has been extended to permit communication between mobiles and fixed entities in the network known as SMS Hosts. SMS Hosts are typically used for receiving the results of SMS voting events, or transmitting messages such as football results in bulk to users who subscribe to a premium service for example. SMS Hosts are responsible for an increasing proportion of SMS traffic.

One of the features of SMS is that an identifier corresponding to the sender's identity is always transmitted to the recipient. It may not be optionally withheld by the sender. This Calling Line Identity (CLI) is normally sent and may be displayed in the form of an MSISDN, though most handsets will translate this to an alphanumeric name if there is a corresponding MSISDN entry in the handset's address book. This provides ease of recognition of the sender, without the recipient having to remember telephone numbers. The mobile CLI feature is analagous to the CLI facility available on fixed

30

networks. Another benefit of receiving CLI is that a reply to the message is more easily achieved, without having to explicitly specify the return address. The MMI for mobile handsets in GSM defines Reply as a standard feature.

- 5 As an alternative to transmission of the CLI identifier as an MSISDN, the GSM system also supports the transmission of a short Alphanumeric value or name of up to 11 characters instead. Support for reception and correct display of an Alphanumeric CLI is almost universally available on recent mobile telephones. This facility is being used increasingly by SMS Hosts to brand the messages that are sent to subscribers. In most cases, telephone numbers associated with SMS Hosts or companies originating brand-related SMS traffic would not be pre-programmed into recipients' handsets. The CLI of such messages would therefore carry no value to the user in promoting or recognising the identity of the message source. By using an alphanumeric CLI (such as Coca-Cola or Amex) the user is immediately able to recognise the source, instead of receiving a message from an unrecognised number.

- Most handsets support use of the MMI's reply function with messages that have alphanumeric CLIs. The reply function takes the CLI and uses it as the new destination address. Network capabilities to route messages to alphanumeric destination addresses are now being introduced, and the use of alphanumeric addressing is set to grow strongly over time, as users discover the convenience of being able to send messages to names rather than numbers. For example it may be very useful for a motorist to be able to send a text message to the 'AA' or 'RAC' motoring organisation in the event of a breakdown, requesting a call back without having to know a telephone number to call.

- It is already known in the art that directory services may be offered to subscribers by means of text message responses to enquiries. Normally, the enquiry takes the form of a voice call, with the desired directory number being spoken to the user and/or returned to the user in the body of a text message. Receipt of the number in a text message is useful because it removes the need for the user to record and re-enter the number. The user is able to extract the telephone number from the text message.

possibly with the assistance of a handset MMI function, and easily initiate a voice call to this number.

5 However this service only readily caters for directory entry retrievals for the purpose of making voice calls. If the user, as is increasingly the case, wishes to initiate a text message to a destination for which he does not have a telephone number, then this type of directory service does not provide a convenient way to use the returned number. Transferring a telephone number from the body of a received text message to the destination address field of a new message is a difficult operation on most handsets,  
10 and users may still have to resort to pencil and paper. Even if a memorable alphanumeric address is returned, the user still has to manually transfer the string correctly into a destination address.

15 The present invention proposes a means for providing an address to a user in a convenient form so that the user may be able to very simply initiate a text message to that address. This facility would be usable for example by a directory service that returns desired directory information to the user.

The invention works by returning the desired address information in the originating address field of the information message. This means that either the handset's MMI for  
20 extracting numbers from a message can be used (e.g. to make a voice call) or the handset's Reply function can be used to initiate a text message. In the latter case the directory information will be transposed automatically into the destination address field of the new message without any further intervention by the user.

25 In a preferred embodiment, the returned directory information would comprise an alphanumeric address where possible. In order for the network to be able to deliver a text message addressed to an alphanumeric address, some translation or lookup is required in the network, and this function is normally achieved by means of SMS Routers although other methods are possible. It is desirable that a directory service  
30 making use of the present invention returns an alphanumeric address only when the network is capable of translating or routing that address when it is used as a destination address for a text message. Therefore there is preferably some correspondence

between the alphanumeric entries in the directory database and in the network's routing database. For destinations where the network has no means for deriving routing information from an alphanumeric address, a telephone number could be returned instead by a directory service.

5

#### **STATEMENT OF INVENTION:**

According to the invention there is provided apparatus for use with a mobile telephone network operable on receipt of a request signal from a subscriber to transmit a response message to the subscriber, the response message containing address  
10 information in numeric or alphanumeric form, the address information relating to information provided by the subscriber in the request signal, and the said address information being passed to the subscriber in the originating address field of the response message.

#### **BRIEF DESCRIPTION OF DRAWINGS:**

Referring to Figure 1, users are connected to a mobile telephone network either directly ('on-net') or indirectly whilst roaming ('off-net') and are able to send mobile originated text messages via an MSC (1). The MSC is connected to an SMS Router (2) which is able to examine message characteristics. Dependent upon characteristics of  
20 the message the SMS router is operable to identify and select certain messages. These selected messages may be passed to a message processing means (3), which may be either fully or partly internal or external to the SMS router. If the transformation means is external to the SMS Router, it may involve interaction with one or more third party equipments. The apparatus is further operable to transmit the response to the user in  
25 the form of a message sent either directly back to the user or via a storage means such as an SMSC (4). In the case of direct transmission, the SMSC route may be used as a fallback in the event of failure to deliver directly.

**SPECIFIC DESCRIPTION:**

In a preferred embodiment, a network is able to route messages based on an alphanumeric destination address provided the address is also held in a database associated with its routing function. SMS Routers provide this routing, by matching alphanumeric destination addresses against a database, either translating matching addresses to their corresponding numeric form or routing these messages directly to corresponding destinations and either rejecting or passing transparently to an SMSC those messages with unmatched alphanumeric addresses.

10 It is the purpose of one aspect of the invention to allow subscribers to make easier use of the alphanumeric routing capabilities of the network by providing directory enquiry results, or information service responses that take the form of a network address, in alphanumeric form. The advantage of this is that it promotes brand recognition, and is therefore a saleable facility attractive to companies that actively promote their brand  
15 identities.

It is a further aspect of the invention that the address information should be supplied in the originating address field of the reply message, thereby facilitating message reply by the user to the desired address using the built in Reply function of the handset's  
20 MMI. Address information and supporting text may also be supplied in the body of the text message, both for backward compatibility with existing directory services and for use by the user for purposes other than SMS Reply.



1/1

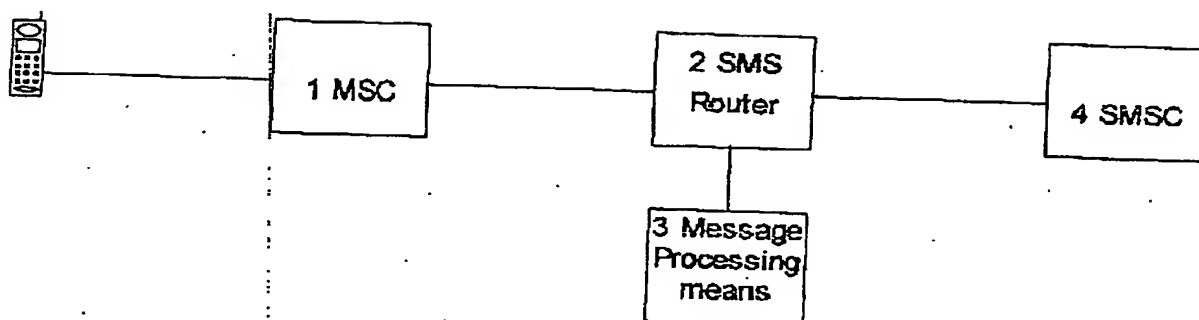


Figure 1

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